

**U.S. Department of Energy
Technical Qualification Program**

Emergency Management Topical Area

Study Guide

<p>Appendix A Glossary</p>

May 1996



Accident Response Group (ARG)

A group of technical and scientific experts composed of U.S. Department of Energy (DOE) and DOE contractor personnel assigned responsibility for providing DOE assistance to peacetime accidents and significant incidents involving nuclear weapons anywhere in the world.

Aerial Measuring System (AMS)

An aerial detection system with the capability of measuring extremely low levels of gamma radiation and locating and tracking airborne radiation. The system also has aerial photography and multispectral sensing capabilities.

Agency Lead Official

The designated official in each participating agency authorized to direct that agency's response to a radiological emergency.

Airborne Release

A release of any material or effluent into the air.

Alarm

A series of alerting devices, which may include effluent or stack monitor alarms, duress alarms, vault alarms, gas alarms, entry alarms, radiation monitor alarms, or other alarms.

Alert

An emergency class within the operational and energy categories of emergency. Within the operational emergency category, an Alert represents events in progress or having occurred that involve an actual or potential substantial reduction of the level of facility safety and protection. Any environmental releases of hazardous materials are expected to be limited to small fractions of the appropriate Protective Action Guide or Emergency Response Planning Guideline on site. During an energy emergency, an Alert represents an event that has occurred or is in progress which is noteworthy; the potential impacts are not expected to be serious, and a negligible long-term supply impact is anticipated.

Appraisal

The formal process by which external or oversight organizations evaluate the ability of an organization or facility to comply with DOE and other applicable regulations, Orders, plans, and procedures.

**Appraisal Program**

A program to ensure that stated capabilities are sufficient to implement emergency plans and that appropriate and timely improvements are made in response to needs identified through coordinated emergency planning, resource allocation, training, drills, exercises, and evaluations.

Assessment

The internal process by which an organization evaluates compliance with DOE and other applicable regulations, Orders, plans, and procedures, conducted within a single, cognizant Program Office.

Atmospheric Release Advisory Capability (ARAC)

A centralized computer-based system that provides estimates of the transport, diffusion, and deposition of radioactive or other hazardous material released to the atmosphere and dose projections to people and the environment.

Attention (or Alert) Signal

A three- to five-minute steady tone, sounded strictly at the option of and on the authority of local government officials. The signal may be activated for natural or man-made disasters, as local authorities may determine, and may also be used to call attention to essential emergency information. Use of the attention or alert signal should always be accompanied by a public explanation and instructions to the public over local broadcast stations or by other means.

Category of Emergency

One of the three types of emergencies: operational, energy, and continuity of government (COG). The purpose of these groupings is to further divide emergencies by the cause of the occurrence.

Classification

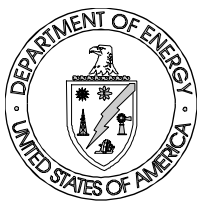
The act of determining the level of damage to national security caused by the release of previously unclassified data. A classification official assesses an incident for dangers to national security and temporarily removes any information from public access until an authorized classification official can determine the classification level.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This act (Public Law 96-510) is legislation passed in 1980 that created the first comprehensive Federal law to respond to releases of hazardous substances in the environment. CERCLA is commonly referred to as Superfund. It was substantially amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA).



Conduct of Operations	Quality and uniformity of operations at DOE facilities managed through a consistent and auditable set of requirements, standards, and responsibilities consistent with DOE Order 5480.19.
Consequence Assessment	The evaluation and interpretation of radiological or other hazardous substance measurements and other information to assess the impact of their release, which provides a basis for decision making. Consequence assessment can include projections of off-site impact.
Consequences	The results or effects (especially projected doses or dose rates) of a release of radioactive or hazardous materials to the environment.
Continuity of Government (COG) Emergency	A condition caused by a domestic or enemy attack involving a national security threat to the continuity of the Federal government.
Control Cell	In an exercise, participants responsible for providing simulated telephone responses for nonparticipating organizations or individuals; the control cell also documents player actions and makes post-exercise corrective action recommendations, in addition to providing post-exercise critiques.
Controller	A trained individual responsible for controlling aspects of a drill or exercise by distributing information (messages, indications, or data) to players. Controllers are also responsible for ensuring players adhere to established safety precautions and limitations.
Corrective Actions	Those measures taken to terminate or mitigate the consequences of an emergency at or near the source of the emergency.
Crisis Manager (CM)	The senior person designated to assume command of operations in a particular emergency operations center and authorized to direct the emergency management team assigned to that emergency operations center. May also be called by other names such as team leader.
Criticality Accident	An unplanned incident where a series of faults and/or errors causes a very short-lived, uncontrolled nuclear chain reaction.



Criticality Alarm

A device incorporating a radiation detector and alarm circuitry placed at locations where significant quantities of fissionable material are handled or stored. At a preset value, the device triggers alarms indicating that high radiation is present at the detector probe and that a criticality accident may have occurred.

Critique

A meeting of the participants of a drill or exercise, usually held shortly after its conclusion, during which drill instructors, coaches, exercise controllers, and/or group evaluators review the operation and the performance of individuals and groups.

Damage Assessment

The estimate of physical property damage and losses to DOE operations, facilities, and equipment as the result of an emergency.

Decontamination

The removal of radioactive contaminants or other hazardous materials.

Deficiency

A finding demonstrating a failure to meet the requirements of a DOE Order(s) or the failure to meet evaluation criteria.

Director of Emergency Operations (DEO)

The DOE official with responsibility to coordinate the planning, development, and implementation of the overall DOE Emergency Management System.

DOE Emergency Operations Center (EOC)

The center located at DOE Headquarters through which DOE's emergency management team coordinates the Departmental response to an emergency.

Drill

A drill is a supervised instruction session for the purpose of developing, testing, and/or maintaining skills in a particular area of emergency response capability. The supervised instruction includes the conduct, evaluation, and critique of the drill by a person(s) trained in these activities. A scenario, usually of limited scope, is utilized to identify the simulated emergency conditions or information that necessitates emergency response actions.

Drill/Exercise Coordinator (Director)

The individual with overall responsibility for a drill or exercise.



Duty Officers	Personnel with appropriate knowledge of emergency procedures to act as intermediate crisis managers. Duty officers generally have a prescribed period of assigned duties.
Emergency	An emergency is the most serious event and consists of any unwanted operational, civil, natural-phenomenon, or security occurrence that could endanger or adversely affect people, property, or the environment.
Emergency Action Levels (EALs)	Specific, predetermined, observable criteria used to detect, recognize, and determine the emergency class of operational emergencies. An EAL can be an instrument reading; an equipment status indicator; a measurable parameter, on site or off site; a discrete, observable event; results of analyses; or another observed phenomenon that indicates entry into a particular emergency class.
Emergency Actions	A collective term encompassing the assessment, corrective, and protective actions taken during the course of an emergency.
Emergency Broadcast System (EBS)	Broadcast stations and interconnecting facilities that have been authorized by the Federal Communications Commission to operate in a controlled manner during a war, state of public peril or disaster, or other national emergency as provided by the EBS plan.
Emergency Class	A subset under the categories of emergency (operational, energy, continuity of government). The class further differentiates an emergency by the degree of severity, depending on the actual or potential consequences of the emergency situation. For the operational and energy emergency subcategories, the classes are Alert, Site Area Emergency, and General Emergency. For the continuity of government subcategory, the four classes are: Pre-Attack, Transattack, Immediate Post-Attack, and Post-Attack (Reconstitution or Recovery).
Emergency Event Classification	The process of determining if an event or condition should be placed in one of four emergency response levels (or classes) based on the actual or potential degradation of safety.
Emergency Management	The development, coordination, and direction of planning, preparedness, and readiness assurance activities.



Emergency Management Advisory Committee (EMAC)

A select committee that supports the DEO in the development of specific policy and technical recommendations affecting Departmental emergency preparedness. Its membership parallels that of the Secretary's Executive Committee, with representatives appointed by Departmental Assistant Secretaries, Directors, and Administrators. In addition, the General Counsel and the heads of DOE field elements also appoint representatives to the EMAC.

Emergency Management Coordination Committee (EMCC)

A group of senior-level representatives from appropriate organizations who collectively provide executive oversight and coordination of the Emergency Management System. The EMCC is chaired by the Under Secretary.

Emergency Management System (EMS)

A DOE program for the development, coordination, and direction of emergency planning, preparedness, response, and readiness assurance.

- *Planning.* The development and preparation of emergency plans and procedures and the determination of availability of resources to provide an effective response.
- *Preparedness.* The training of personnel, acquisition of resources and facilities, and testing of emergency plans and procedures to ensure an effective response.
- *Response.* The action(s) taken to cope with and minimize the effects of any emergency.
- *Readiness assurance.* The actions taken to provide assurance that Headquarters, field elements, and facility contractors implement appropriate aspects of DOE emergency management program policies and requirements as established by DOE Orders.

Emergency Management Team (EMT)

A DOE team designated to manage response actions during emergencies involving DOE facilities or requiring DOE assistance. EMTs are formed at the contractor, field element, and DOE Headquarters levels. The Headquarters EMT consists of the executive team and the technical operations cadre. EMTs are formed in response to operational, energy, and continuity of government emergencies.



Emergency Operations Center (EOC)

A facility from which management and support personnel carry out emergency response activities. The EOC may be a dedicated facility or office, conference room, or other predesignated location having appropriate communications and informational materials to carry out the assigned emergency response mission and located, where possible, in a secure and protected location. (See emergency control center.)

Emergency Plan

A brief, clear, and concise description of the overall emergency organization, designation of responsibilities, and descriptions of the procedures, including notifications, involved in coping with any or all aspects of a potential credible emergency.

Emergency Planning Zone (EPZ)

A geographic area surrounding a specific DOE facility for which special planning and preparedness efforts are carried out to ensure that prompt and effective protective actions can be taken to reduce or minimize the impact to on-site personnel, public health and safety, and the environment in the event of an operational emergency.

Emergency Preparedness

1. The training of personnel, acquisition of resources and facilities, and testing of emergency plans and procedures to ensure effective response.
2. Those activities necessary in preparation for incident response.

Emergency Readiness Assurance Appraisal

Appraisal of DOE elements' and DOE- or contractor-operated facilities' full-participation exercises that test and demonstrate an integrated on-site and off-site emergency capability.

Emergency Readiness Assurance Plan (ERAP)

A plan to ensure that emergency plans, implementing procedures, and resources are adequate and sufficiently exercised and evaluated.

Emergency Response

The action(s) taken to cope with and minimize the effects of any emergency.

Emergency Response Organization (ERO)

The designated group(s) of personnel responsible for coping with and minimizing or mitigating the effects of any emergency.



Emergency Response Planning Guidelines (ERPGs)

A hazardous material personnel exposure level or range that, when exceeded by a short-term or acute exposure, will cause adverse reproductive, developmental, or carcinogenic effects in humans. The ERPGs are approved by a committee of the American Industrial Hygiene Association.

Emergency Response Team

The Federal Emergency Management Agency (FEMA) team deployed to a radiological emergency scene by the FEMA director to make an initial assessment of the situation and then provide FEMA's primary response capability.

Energy Emergency

A category of emergencies involving a condition or potential condition affecting the supply of energy or the energy infrastructure with significant potential impact on the national economy or security, defense preparedness, and/or health and safety.

Evacuation

The orderly withdrawal of individuals from a hazardous or threatened area until such time as the area is again deemed safe for use.

Evaluator

A trained individual assigned to monitor aspects of a drill or exercise and responsible for observing, evaluating, documenting, and critiquing the performance of players and the effectiveness of procedures and equipment.

Event

Any real-time occurrence or significant deviation from planned or expected behavior that could endanger or adversely affect people, property, or the environment.

Executive Team

A component of the Headquarters emergency management team. The Headquarters executive team provides strategic direction to the emergency response and evaluates the impacts of the emergency on the DOE complex. The organization of the Headquarters executive team is outlined in Attachment III to DOE Order 5500.1B.

**Exercise**

A large-scale event that tests the integrated capability for response to an actual emergency and tests most aspects of the emergency management program associated with the facility, operation, or activity. Exercises test the adequacy of timing and content of emergency plan implementing procedures; test the notification and communication networks; test emergency equipment; ensure emergency response personnel are familiar with their duties, responsibilities, and equipment; and involve mobilization of sufficient resources to verify overall response capability to a simulated emergency.

Exercise/Drill Package

The cumulative documentation prepared for controllers and evaluators that provides the information necessary to prepare, conduct, and evaluate a drill or exercise. The information includes (1) scope; (2) objectives; (3) participants; (4) administrative and logistic details; (5) safety precautions and limitations; (6) a narrative summary of the scenario; (7) a time line of key scenario events; (8) scenario messages; (9) maps, diagrams, and/or data tables supplemental to scenario messages; (10) instructions for controllers and evaluators; and (11) evaluation criteria.

Exercise Evaluation Criteria

Standards used by evaluators to determine when an objective has been adequately demonstrated. Evaluation criteria are developed for each exercise objective.

Exercise Evaluation Report

A post-exercise report identifying program strengths and weaknesses. The evaluation report is a collection of all controller, evaluator, and player critique reports and comments regarding deficiencies, problems, or performance.

Exercise Objectives

Specific, measurable performance objectives selected by the exercise planning committee that are used for exercises. The objectives are designed to demonstrate or test specific response procedures and/or capabilities.

Exercise Planning Group/Committee

A planning organization made up of individuals possessing the expertise required for development, review, and approval of an exercise package.



Federal Emergency Management Agency (FEMA)

The Federal government agency that has been tasked to coordinate continuity of government (COG) planning for the entire domestic Federal government. In this sphere, FEMA provides the physical facilities for the COG program and arranges for and conducts training and exercises. In addition, FEMA provides administrative and logistical support for COG activities.

Federal Evaluators

For the purposes of an exercise, representatives of Federal agencies who will evaluate the players' performance.

Federal Radiological Emergency Response Plan (FRERP)

A comprehensive, coordinated plan broadly describing the entire Federal government response to radiological emergencies in support of Federal, state, and local government agencies.

Federal Radiological Monitoring and Assessment Center (FRMAC)

A facility established by DOE, usually at an airport near the scene of a radiological emergency, from which the off-site Technical Director conducts the Federal Radiological Monitoring and Assessment Plan response.

Field Facility/Building Emergency Plans

Plans prepared by Headquarters, field elements, field contractors, or offices under field element jurisdiction to guide emergency response for specific buildings or facilities (e.g., office buildings, Forrestal and Germantown buildings, process buildings, laboratories).

Field Monitoring

The use of sensitive detection equipment by trained personnel to perform measurements to determine the presence and levels of radioactive or other hazardous substance contamination at selected geographic locations in the off-site environment.

Field Site Emergency Plans

Plans prepared by field element contractors or other entities under field element jurisdiction to guide their responses for identified credible emergencies.

Free Play

The standard practice during drills and exercises of allowing the players to go as far as possible in their respective response actions to the simulated emergency events without jeopardizing personnel safety or plant/facility safety, exceeding established limitations on utilization of resources, or compromising the established objectives.



Full-Scale Exercise

An emergency exercise that tests all (or major) aspects of the facility, state, and local emergency plans; tests emergency equipment and communications networks; tests the notification systems; and ensures that emergency organization personnel are capable of assuming their responsibilities and emergency duties.

General Emergency

One of the classes of emergencies in the operational and energy emergency categories. Within the category of operational emergency, a General Emergency represents events that are in progress or have occurred which involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure of safety or protection systems threatening the integrity of a weapon or test device which could lead to substantial off-site impacts. Any environmental release of hazardous materials can reasonably be expected to exceed the appropriate Protective Action Guide (PAG) off site. Within the category of energy emergency, a General Emergency is an event that has occurred which has major energy supply impacts. Examples of such events are a major electrical energy system outage affecting consumers in more than two states or an earthquake affecting the United States or a U.S. territory that measures over 7.1 on the Richter scale.

Hazard

A process, condition, or asset that has the potential to adversely impact the health and safety of personnel, the public, the environment, or national security. Hazards are divided into three classes:

- low Hazards that present minor on-site and negligible off-site impacts to people, the environment, or national security.
- moderate Hazards that represent considerable potential on-site impacts to people or the environment, but at most only minor off-site impacts to people, the environment, or national security.
- high Hazards with the potential for on-site and off-site impacts to large numbers of persons or with the potential for major impacts to the environment or national security.



Hazard Analysis

The procedure for identifying potential sources of a hazardous materials release, determining the vulnerability of an area to a hazardous materials release, and comparing hazards to determine risks to a community. Also referred to as "hazards assessment." (See also hazard and operability study.)

**Hazardous Materials
Transportation Uniform
Safety Act of 1990
(HMTUSA)**

Reauthorization of the 1979 Hazardous Materials Transportation Act to provide national direction and guidance to enhance hazardous materials emergency preparedness activities at state and local levels.

Hazards Assessment

Used as a foundation for emergency planning purposes; includes identification of any hazards and targets unique to a facility, analyses of potential accidents or events, and evaluation of potential accident or event consequences.

Headquarters Teams

At the national level, DOE is required to maintain a crisis management team as well as provide representation to a National Emergency Management Team (NEMT). The DOE crisis management team would carry out the national-level essential functions of the Department, as prescribed in Executive Order 12656, as long as Headquarters remains a viable operating site.

**Immediate Response Zone
(IRZ)**

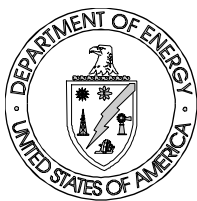
Those areas nearest to (the stockpile) the site of an emergency where prompt and effective response is most critical. Because of the potentially limited warning and response time available in the event of an accidental release of a chemical agent, the IRZ extends to a distance having less than one hour of response time under 3 meters per second (about 6.8 miles per hour) wind speeds.

**Immediately Dangerous to
Life or Health (IDLH)
Values**

As defined in 29 *Code of Federal Regulations* Part 1926.103, a condition that poses either an immediate threat to life and health or an immediate threat of severe exposure to contaminants.

Improvement Item

An observation or finding citing deviations or concerns regarding a particular (emergency exercise evaluation) criterion. An improvement item, by itself, does not degrade the adequate demonstration of a standard, but the emergency response could be made more effective if the identified industry practices or good emergency management practices were implemented.



Incident	Any deviation from normal operations or activities that has the potential to result in an emergency. An incident usually refers to a malevolent act.
Incident Commander (IC)	The individual responsible for the management of all operations at a particular hazardous materials emergency.
Incident Command Post (ICP)	The location at which the primary command functions are executed, usually collocated with the incident base.
Incident Command System (ICS)	The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.
Ingestion Exposure Pathway Emergency Planning Zone	A circular geographic zone with a 50-mile radius centered at a nuclear power plant for which plans are developed to protect the public from exposure to radiation, principally from the ingestion of water or foods such as milk or fresh vegetables that are contaminated as a result of a nuclear power plant accident.
Joint Information Center (JIC)	A centralized facility where organizations responding to an emergency coordinate the release of accurate and timely information to the public and the media and provide a central source for all instructions. A JIC is operated cooperatively by all responding levels of Federal, state, and local governments and organizations, and the involved facility.
Lead Federal Agency (LFA)	The Federal agency which owns, authorizes, regulates, or is otherwise deemed responsible for ameliorating an emergency and which has the authority to take whatever action is necessary to stabilize the situation.
Local Emergency Planning Committee (LEPC)	A committee appointed by the State Emergency Response Commission, as required by Title III of the Superfund Amendments and Reauthorization Act, to formulate a comprehensive emergency plan for its district.



Master Scenario of Events List (MSEL)

A listing of the key sequence of emergency exercise events contained in the detailed narrative exercise scenario, usually appearing in a concise, tabular form.

Material Safety Data Sheet (MSDS)

Information on hazardous chemicals required to be submitted by facility owners and operators under 1910.1200(g) of Title 29 of the *Code of Federal Regulations*.

Messages ("Scenario Messages")

The mechanism used by controllers in a drill or exercise to provide information concerning the (supposed) occurrence of an event that requires player response.

Mutual Assistance Agreement (MAA)

Agreement between contractors and DOE and/or DOE and other government agencies or municipalities to share emergency response and techniques. Also known as mutual aid agreement.

National Contingency Plan (NCP)

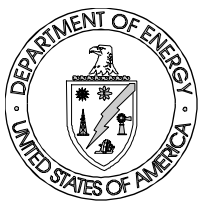
See National Oil and Hazardous Substance Pollution Contingency Plan.

National Oil and Hazardous Substance Pollution Contingency Plan (NCP)

A plan established by 40 *Code of Federal Regulations* Part 300 that effectuates the response powers and responsibilities created by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the authorities established by the Clean Water Act (as amended). The plan is to minimize damage from oil and hazardous substances discharges, including containment, disposal, and removal, and to protect the environment from the damaging effects of pollution discharges.

National Response Team (NRT)

Consisting of representatives of 14 government agencies (Department of Defense [DOD], Department of the Interior [DOI], Department of Transportation/Research and Special Programs Administration [DOT/RSPA], Department of Transportation/U.S. Coast Guard [DOT/USCG], Environmental Protection Agency [EPA], Department of Commerce [DOC], Federal Emergency Management Agency [FEMA], Department of State [DOS], U.S. Department of Agriculture [USDA], Department of Justice [DOJ], Department of Health and Human Services [HHS], Department of Labor [DOL], Nuclear Regulatory Commission [NRC], and DOE.) The NRT is the principal organization for implementing the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). When the NRT is not activated for a response action, it



serves as a standing committee to develop and maintain preparedness, evaluate methods of responding to discharges or releases, recommend needed changes in the response organization, and recommend revisions to the NCP. The NRT may consider and make recommendations to appropriate agencies on the training, equipping, and protection of response teams and necessary research, development, demonstration, and evaluation to improve response capabilities.

Natural Disaster

Any flood, high water, wind-driven water, drought, fire, hurricane, tornado, storm, earthquake, tidal wave, volcano, or other natural occurrence causing significant damage.

Notification

The action taken by persons who, becoming aware of an incident in progress, convey the initial information to the appropriate authorities, and the process by which this information is further relayed to higher authority and to the concerned government agencies.

Nuclear Emergency Search Team (NEST)

A group of experts, assisted by radiation detection systems and associated personnel, assigned responsibility to provide technical assistance to law enforcement agencies in nuclear threat emergencies for the search and identification of any ionizing radiation-producing materials that may have been lost or stolen or may be associated with bomb threats or radiation dispersal threats.

Observer (Visitor)

An individual participating in a drill or exercise solely for the purpose of observing the activities for official and/or educational reasons. An observer's participation is limited to passive observation of the activities, and an observer has no interface with any of the players.

Occurrence Report

A written evaluation of an event or condition that is prepared in sufficient detail to enable the reader to assess its significance, consequences, or implications, and to evaluate the actions being proposed or employed to correct the condition or to avoid recurrence.



Off-Normal Occurrence	An abnormal or unplanned event or condition, as described in DOE Order 5000.3A, that adversely affects, potentially affects, or is indicative of degradation in the safety, security, environmental, or health protection performance or operations of a facility.
Off Site	The area beyond the boundaries of the site.
Off-Site Notification/Warning	An emergency notification and/or warning message issued to the state/local government and/or the public.
Off-Site Response Interfaces	Formal prearranged and documented plans, agreements, understandings, and/or other prearrangements for mutual assistance that define the emergency measures to be provided by non-DOE entities.
On Scene	The area surrounding an accident or incident site that is, or potentially could be, affected by the accident or incident. This area includes both the on-site and off-site areas.
On-Scene Commander (OSC)	An officer or senior official who commands Department of Defense (DOD) and/or DOE operations at the scene of a DOD or DOE nuclear weapon accident or significant incident; for a security event, the officer or senior official who commands operations at the scene of the event.
On-Scene Coordinator (OSC)	The Federal official predesignated by the Environmental Protection Agency or the U.S. Coast Guard to coordinate and direct the Federal response under Subpart D of the National Contingency Plan or the official designated by the lead agency to coordinate and direct removal activities under Subpart E of the National Contingency Plan.
On Site	The facility, site, or area over which the cognizant Federal agency has access control authority. The on-site area includes any area that has been established as a National Defense Area or National Security Area.



Operational Emergency

One of the three categories of emergencies. Operational emergencies are significant accidents, incidents, events, or natural phenomena that seriously degrade the safety or security of DOE facilities. Operational emergencies apply to DOE reactors and other DOE facilities (nuclear and nonnuclear) involved with hazardous materials; DOE-controlled nuclear weapons, components, or test devices; DOE safeguards and security events; and transportation accidents involving hazardous materials.

**Operational Emergency
Event Classes**

Characterization of operational emergencies involving or affecting DOE facilities as Alert, Site Area Emergency, or General Emergency in accordance with DOE Order 5500.2B as determined by emergency action levels.

**Operational Emergency
Management Team
(OEMT)**

A DOE team predesignated to manage activities during operational emergencies involving DOE or requiring DOE assistance.

**Operational Emergency
Response Levels**

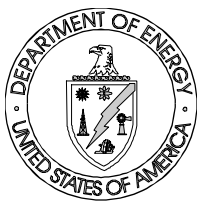
Levels of response to hazardous materials incidents, natural phenomena occurring at nuclear and nonnuclear facilities, safeguards and security incidents, Radiological Assistance Program requests for assistance, and nuclear weapon accidents or significant incidents. For hazardous materials emergencies, the response levels are Unusual Event, Alert, Site Emergency, and General Emergency. For safeguards and security emergencies, response levels are Alert III (Charlie), Alert II (Bravo), and Alert I (Alpha). For Radiological Assistance Program emergencies, the response levels are Radiological Assistance Program Alert and Radiological Assistance Program Emergency. Nuclear weapons accident or significant incident emergencies include all responses by the Accident Response Group, and there are no specific response levels.

Planning

The development and preparation of emergency plans and procedures and the identification of necessary personnel and resources to provide an effective response.



Planning Zone	An area for which planning is done to ensure that prompt and effective actions can be taken to protect emergency personnel, the public health and safety, and the environment in the event of a major emergency.
Player	An individual participating in a drill or exercise responsible for responding in accordance with operational procedures and/or the emergency plan and implementing procedures as if the simulated emergency event is real.
Plume	Airborne material spreading from a particular source. Used to denote dispersal of particles, gases, vapors, and aerosols in the atmosphere. Occasionally referred to as a cloud (for example, a "radioactive cloud"). A release of material into the atmosphere for a short duration may also be denoted as a "puff."
Plume Exposure Pathway	<p>The principal exposure sources for this pathway are the following:</p> <ul style="list-style-type: none">• Whole body external exposure (gamma radiation) and/or contact exposure to skin or eyes (hazardous substances) from contact with materials from the plume and from deposited material• Inhalation and absorption of constituents in the passing plume
Preparedness	The training of personnel; acquisition and maintenance of resources; and exercising of the plans, procedures, personnel, and resources essential for emergency response.
Projected Dose	An estimate of the radiation dose that affected individuals could receive.
Protective Action (Protective Response)	Physical measures, such as evacuation or sheltering, taken to prevent potential health hazards resulting from a release of hazardous materials to the environment from adversely affecting employees or the off-site population.
Protective Action Guide (or Guideline) (PAG)	A radiation personnel exposure level or range beyond which protective action should be considered. PAG values should reflect a balance of risks and costs to on-site personnel, public health and safety, and the environment weighed against the benefits obtained from protective actions.



Protective Action Recommendation (PAR)

Advice to the state on emergency measures it should consider in determining action for members of the public to take to avoid or reduce their exposure to radiation or other hazardous materials.

Protective Action Zone (PAZ)

An area where the available response times and the hazard distances associated with them are sufficiently large to allow most people to respond to an emergency effectively through evacuation. Although the primary emergency response may be evacuation, other options should be considered.

Protective Measures

Measures taken during an emergency for the purpose of preventing or minimizing hazards that are likely to develop if the actions are not taken.

Public Affairs

Personnel involved in summarizing, coordinating, and providing the release of information to the news media in an emergency situation.

Public Information Office/Officer (PIO)

DOE office/official at Headquarters and in the field responsible for preparing and coordinating the dissemination of public information in cooperation with other responding Federal, state, and local agencies.

Radiation Emergency Assistance Center/Training Site (REAC/TS)

A multipurpose medical facility located in Oak Ridge, Tennessee, prepared to deal with all types of radiation exposure emergencies and provide medical and health physics advice and assistance in radiological emergencies.

Radioactivity

The spontaneous decay or disintegration of an unstable atomic nucleus, usually accompanied by the emission of ionizing radiation.

Radiological Accident

A loss of control of radioactive material that presents a potential hazard to personnel, public health, property, or the environment, or the exceeding of the established limit for exposure to ionizing radiation.

Radiological Assistance Program (RAP)

A DOE program that provides for radiological assistance to Federal, state, and major Nuclear Regulatory Commission licensees in the event of an incident involving radioactive materials.



Radiological Assistance Team (RAT)

Experienced DOE and/or DOE contractor professionals who are adequately equipped to conduct off-site radiological emergency monitoring. RATs are at all DOE Operations Offices, all national laboratories, and most Area Offices and associated contractors.

Readiness Assurance

The actions taken to provide assurance that Headquarters, field elements, and facility contractors implement appropriate aspects of DOE emergency management program policies and requirements as established by DOE Orders.

Recovery

Actions taken after a plant has been brought to a stable or shutdown condition to return the plant to normal operation.

Recovery Actions

Those actions taken after an emergency to restore the affected areas as nearly as possible to the pre-emergency condition.

Recovery Plan

A plan developed to restore the affected area with Federal assistance if needed.

Regional Coordinating Office (RCO)

Field offices located at Oak Ridge, Savannah River, Albuquerque, Chicago, Idaho, Richland, and San Francisco that provide radiological assistance coordination, national contingency planning, and regional preparedness committee coordination.

Regional Response Team (RRT)

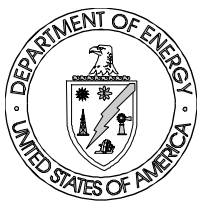
A regional mechanism for planning and preparedness activities for response actions under the National Contingency Plan. Except when an RRT is activated for a removal incident, representatives of the Environmental Protection Agency and the U.S. Coast Guard act as cochairpersons. For such activation, the chairperson shall be the Environmental Protection Agency or U.S. Coast Guard representative, based on whether the discharge or release occurs in the inland zone or coastal zone, unless otherwise agreed upon by the cochairpersons.

Release

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any hazardous chemical, extremely hazardous substance, or Comprehensive Environmental Response, Compensation, and Liability Act hazardous substance.



Reportable Occurrence	Events or conditions to be reported in accordance with the criteria defined in DOE Order 5000.3A. Emergencies, Unusual Occurrences, and Off-Normal Occurrences are Reportable Occurrences.
Reportable Quantity (RQ)	That quantity of a hazardous substance set forth in 40 <i>Code of Federal Regulations</i> Part 302, the release of which requires notification to the National Response Center. If a quantity has not been established by 40 <i>Code of Federal Regulations</i> Part 302, the reportable quantity is 1 pound.
Resource Conservation and Recovery Act (RCRA)	RCRA (Public Law 94-580) regulates all solid waste disposal, with emphasis on the control of hazardous wastes.
Safety Analysis	A documented process to systematically identify the hazards of a DOE operation; to describe and analyze the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and to analyze and evaluate potential accidents and their associated risks.
Safety Analysis Report (SAR)	The document that contains all safety analyses pertinent to the authorization of facility operations.
Scenario	The comprehensive information prepared for a drill or exercise that depicts the simulated emergency. A scenario includes the narrative scenario, overall sequence and timing of events, detailed messages, technical data tables, illustrations, maps, and/or additional information necessary to realistically depict events.
Scenario Development Group	A multidiscipline group of individuals responsible for developing the key sequence of events of the scenario and all necessary data sheets and messages.
Scenario Package	A package prepared for drill or exercise controllers and evaluators that contains the necessary information to understand the scope and conduct of the drill or exercise. Typical information contained in the scenario package includes objectives and scope, narrative descriptions of the scenario, a time line of key scenario events, player messages, operations and radiological protection data, and logistics information.

**Senior Controller (Lead Exercise Controller)**

The individual who is responsible for assigning tasks and coordinating the efforts of all controllers during exercises.

Shelter

A facility used to protect, house, and supply the essential needs of designated individuals during the period of an emergency. A shelter may or may not be specifically constructed for such use, depending on the type of emergency and the specific programmatic requirements.

Sheltering

An in-place, immediate protective action that calls for people to go indoors, close all doors and windows, turn off all sources of outside air, listen to radio or television for emergency information, and remain indoors until official notification that it is safe to go out.

Simulation

As defined for drills and exercises, the fabrication of events. Simulation applies only to the overall emergency or event being staged. Emergency response actions, i.e., the actual procedural actions, utilization of emergency equipment, checking instrument and meter readings, etc., is to actually be performed, not simulated.

Site Area Emergency

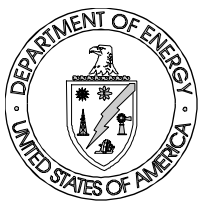
One of the classes of emergency in the operational and energy categories. Within the context of an operational emergency, a Site Area Emergency represents events that are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of onsite personnel, public health and safety, the environment, or national security. Any environmental releases of hazardous materials are not expected to exceed the appropriate Protective Action Guides off site. Within the energy emergency category, a Site Area Emergency represents an event in which a substantial supply impact is anticipated.

Source Term

The amount of material available for release.

Superfund Amendments and Reauthorization Act (SARA)

This act (Public Law 99-499) is legislation passed in 1986 that amends the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. SARA more stringently defines hazardous waste cleanup standards and emphasizes remedies that permanently and significantly reduce the mobility, toxicity, or volume of wastes. Title III of SARA, the Emergency



Planning and Community Right-to-Know Act, mandates establishment of community emergency planning programs, emergency notification, reporting of chemicals, and emissions inventories.

Technical Operations Cadre

A component of the Headquarters emergency management team. The technical operations cadre is made up of personnel from the cognizant Program Office and specialized Headquarters offices. The technical operations cadre provides management and direction to the DOE response; coordinates with other Federal agencies; and provides information to the press, Congress, and other Federal agencies.

Threshold Limit Value (TLV)-Time-Weighted Average (TWA)

The concentration of toxic materials to which nearly all workers may be exposed day after day for a normal 8-hour workday and a 40-hour work week without adverse effect.

Transportation Emergency Preparedness Program (TEPP)

A DOE-coordinated emergency preparedness plan concentrating on nonweapons transportation activities and involving DOE shipments and DOE capabilities to carry out responsibilities under the National Contingency Plan, Federal Radiological Emergency Response Plan, and other regulations.

Unified Dose Assessment

A functional capability to coordinate monitoring teams, collection of monitoring data, and calculation of off-site radiation dose projections, used for the recommendation of protective actions for the plume and ingestion exposure emergency planning zones.

Unusual Event

An emergency response level that represents an event in progress or having occurred which normally would not constitute an emergency, but which indicates a potential reduction of safety of a facility in which no potential exists for significant off-site release of radioactive or other hazardous substances.

Unusual Occurrence

An unusual or unplanned event, as defined by DOE Order 5000.3A, having programmatic significance such that it adversely affects, or potentially affects, the performance, schedule, reliability, security, or safety of a facility.